

# Data & Metrics?

How do you know that you have had a good day?

# 3 P's (SWIPED)

## Purpose

- Using data and metrics to know how your business is doing and what needs to be addressed.

## Process

- A brief awareness piece of how to look for data that is relevant in your business (KPI's and KPD's).

## Payoff

- Inherent value in improving your gauge R&R and making sound operations decisions based on data.

# Why is data important?

## The DMAIC model

- Define
- Measure
- Analyze
- Improve
- Control

## LEAN/Six Sigma

“ You can't improve what you do not measure.”

# Define what is needed

Business Execs need to examine

- Bigger trends in the market
- Changes in pricing of resources
- Shipping & exporting
- Manufacturing

HOW?

# VSM

Mapping of value streams is a good start

- Product Route
- Product Quantity



# Define what is needed

If you are a manufacturer that sells from stock

- The level of stock is dictated by the time to replenish (Kanban )
- Short throughput is needed
- Using small batch runs, short set up times
- What is your average set up time? (SMED)

# Define what is needed

If you manufacture a limited number of product lines

- Capacity is an issue
- How often are machines running ... making good product?
- What is your OEE?
- How do you know when to replace or add more machines?



# Define what is needed

## OEE - What is that metric?

- Overall Equipment Effectiveness

$$\text{OEE} = \text{AV} \times \text{SP} \times \text{Q}$$

$\frac{\text{DT}}{\text{AT}} \quad \frac{\text{ARR}}{\text{TL}} \quad \frac{\text{Good}}{\text{TR}}$

%                      %                      %

# Define what is needed

KPI's

KPD's

$$Y = f(x)$$

Outcome = (x1 + x2 + x3 + x4 + x5...)

All the variables

KPI's are important, KPD's are importanter!

# Where to Measure?

Inputs  
Process  
outputs

## Accurately measure

- Inputs                      Raw Materials, supply chain, services
- Process                     DL, Machines, sub processes, waste
- Outputs                     finished goods
- Overhead                  facilities, admin, compliance

\*Look at Sports analytics and what data is used to measure player effectiveness. Could you imagine putting GPS on employees? Fun thought but I am confident that HR would probably frown on that...

# Benefits of data

Payoff

## Knowing how you are doing to be agile

- How PESTELS can affect your business
- Risk
- Exporting
- Sourcing new inputs

Question - Are there benefits of not having data?

# Benefits of Data

- Having a longer supply chain doesn't improve competitiveness.
- Competing on price is inefficient in the long term.
- Competing on cost is more relevant & cost base is one factor in long term competitiveness.
- How much did you make is a good question...
- What is your gross margin is a better one.

# In conclusion

How do you know that you have had a good day?

*Data speaks with no emotion...*

Q & A

Thank you!